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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (canceled)

2. (currently amended) In a process of The
manufacturing method of a semiconductor integrated circuit
device, a method of cleaning a semiconductor wafer
comprising according to claim 1, a step of performing a
cleaning process using a relatively rotating brush and
wafer and thereby cleaning said wafer,

wherein at least one of a first quantity of cleaning
liquid flowing onto said brush and a second quantity of
cleaning liquid supplied to the wafer from outside of said
brush is regulated in accordance with a cleaning state of
said wafer, and

wherein at least one of said first quantity of said
cleaning liquid and said second quantity of said cleaning
liquid the quantities of said cleaning liquids is regulated

so that an the interval between said brush and said wafer is kept constant.

3. (currently amended) ~~The manufacturing method of a semiconductor integrated circuit device according to claim 1,~~ In a process of manufacturing a semiconductor integrated circuit device, a method of cleaning a semiconductor wafer comprising a step of performing a cleaning process using a relatively rotating brush and wafer and thereby cleaning said wafer,

wherein at least one of a first quantity of cleaning liquid flowing into said brush and a second quantity of cleaning liquid supplied to said wafer from the outside of said brush is regulated in accordance with a cleaning state of said wafer

wherein an the interval between said wafer and said brush is measured, and

wherein a the number of revolutions per minute of said wafer and at least one said first quantity of said cleaning liquid and said second quantity of said cleaning liquid is ~~of the quantities of said cleaning liquids are regulated in~~ accordance with a result of said measurement result thereof.

4. (currently amended) ~~The manufacturing method of a semiconductor integrated circuit device according to claim 1,~~ In a process of manufacturing a semiconductor integrated circuit device, a method of cleaning a semiconductor wafer comprising a step of performing a cleaning process using a relatively rotating brush and wafer and thereby cleaning said wafer,

wherein at least one of a first quantity of cleaning liquid flowing into said brush and a second quantity of cleaning liquid supplied to said wafer from the outside of said brush is regulated in accordance with a cleaning state of said wafer

wherein at least one of said first quantity of said cleaning liquid and said second quantity of said cleaning liquid is the quantities of said cleaning liquids are regulated in accordance with a position of said brush on said wafer.

5. (currently amended) ~~The manufacturing method of a semiconductor integrated circuit device according to claim 1,~~ In a process of manufacturing a semiconductor integrated circuit device, a method of cleaning a semiconductor wafer

comprising a step of performing a cleaning process using a relatively rotating brush and wafer and thereby cleaning said wafer,

wherein at least one of a first quantity of cleaning liquid flowing into said brush and a second quantity of cleaning liquid supplied to said wafer from the outside of said brush is regulated in accordance with a cleaning state of said wafer

wherein said when cleaning is performed while said brush is moved from the center of said wafer toward the outer circumference thereof, and the first quantity of the cleaning liquid flowing into said brush is regulated so as to be slowly increased as said brush is moved from the center of said wafer toward the circumference thereof.

6. (currently amended) ~~The manufacturing method of a semiconductor integrated circuit device according to claim 1,~~ In a process of manufacturing a semiconductor integrated circuit device, a method of cleaning a semiconductor wafer comprising a step of performing a cleaning process using a relatively rotating brush and wafer and thereby cleaning said wafer,

wherein at least one of a first quantity of cleaning liquid flowing into said brush and a second quantity of cleaning liquid supplied to said wafer from the outside of said brush is regulated in accordance with a cleaning state of said wafer

wherein said when cleaning is performed while said brush is moved from the center of said wafer toward the outer circumference thereof, said outer circumference of said wafer having a peripheral velocity greater than a peripheral velocity of said center of said wafer, whereby said peripheral velocity increases from said center of said wafer toward said periphery of said wafer, and the first quantity of cleaning liquid flowing into said brush is regulated so as to be slowly increased in accordance with said increase in the peripheral velocity of said wafer.

7. (currently amended) ~~The manufacturing method of a semiconductor integrated circuit device according to claim 1,~~ In a process of manufacturing a semiconductor integrated circuit device, a method of cleaning a semiconductor wafer comprising a step of performing a cleaning process using a relatively rotating brush and wafer and thereby cleaning said wafer,

wherein at least one of a first quantity of cleaning liquid flowing into said brush and a second quantity of cleaning liquid supplied to said wafer from the outside of said brush is regulated in accordance with a cleaning state of said wafer,

wherein said when cleaning is performed while said brush is moved from the center of said wafer toward the outer circumference thereof, and the second quantity of cleaning liquid supplied from the outside of said brush to the wafer is regulated so as to be slowly decreased as said brush is moved from the center of said wafer toward the outer circumference thereof.

8. (currently amended) ~~The manufacturing method of a semiconductor integrated circuit device according to claim 1,~~ In a process of manufacturing a semiconductor integrated circuit device, a method of cleaning a semiconductor wafer comprising a step of performing a cleaning process using a relatively rotating brush and wafer and thereby cleaning said wafer,

wherein at least one of a first quantity of cleaning liquid flowing into said brush and a second quantity of cleaning liquid supplied to said wafer from the outside of

said brush is regulated in accordance with a cleaning state of said wafer,

wherein said when cleaning is performed while said brush is moved from the center of said wafer toward the outer circumference thereof, said outer circumference of said wafer having a peripheral velocity greater than a peripheral velocity of said center of said wafer, whereby said peripheral velocity increases from said center of said wafer toward said periphery of said wafer, and the second quantity of cleaning liquid supplied from the outside of said brush to the wafer is regulated so as to be slowly decreased in accordance with said increase in the peripheral velocity of said wafer.

9. (currently amended) The manufacturing method of a semiconductor integrated circuit device according to claim [[1]] 5,

~~wherein when cleaning is performed while said brush is moved from the center of said wafer toward the outer circumference thereof, the quantity of cleaning liquid to flowing into said brush is regulated so as to be slowly increased and the second quantity of the cleaning liquid supplied from the outside of said brush to the wafer is~~

regulated so as to be slowly decreased as said brush is moved from the center of said wafer toward the outer circumference thereof.

10. (currently amended) The manufacturing method of a semiconductor integrated circuit device according to claim [[1]] 6,

~~wherein when cleaning is performed while said brush is moved from the center of said wafer toward the outer circumference thereof, the quantity of cleaning liquid flowing into said brush is regulated so as to be slowly increased and the second quantity of the cleaning liquid supplied [[to]] from the outside of said brush to the wafer is regulated so as to be slowly decreased in accordance with said increase in the peripheral velocity of said wafer.~~

11. (currently amended) ~~The manufacturing method of a semiconductor integrated circuit device according to claim 1,~~ In a process of manufacturing a semiconductor integrated circuit device, a method of cleaning a semiconductor wafer comprising a step of performing a

cleaning process using a relatively rotating brush and wafer and thereby cleaning said wafer,

wherein at least one of a first quantity of cleaning liquid flowing into said brush and a second quantity of cleaning liquid supplied to said wafer from the outside of said brush is regulated in accordance with a cleaning state of said wafer,

wherein, after said wafer is cleaned, when said brush returns to a wait section, and demineralized water is discharged a discharge flow rate of demineralized water from the brush at a flow rate that is greater than said flow rate before said brush returns to said wait section increased while the wafer is cleaned.

12. (currently amended) ~~The manufacturing method of a semiconductor integrated circuit device according to claim 1,~~ In a process of manufacturing a semiconductor integrated circuit device, a method of cleaning a semiconductor wafer comprising a step of performing a cleaning process using a relatively rotating brush and wafer and thereby cleaning said wafer,

wherein at least one of a first quantity of cleaning liquid flowing into said brush and a second quantity of

cleaning liquid supplied to said wafer from the outside of
said brush is regulated in accordance with a cleaning state
of said wafer,

wherein, after said wafer is cleaned, when said brush returns to a wait section, and said brush itself is cleaned while said brush is brought into contact with a removal member and brush-cleaning water is supplied to a contact portion thereof.

13. (currently amended) ~~The manufacturing method of~~
~~a semiconductor integrated circuit device according to~~
~~claim 1,~~ In a process of manufacturing a semiconductor
integrated circuit device, a method of cleaning a
semiconductor wafer comprising a step of performing a
cleaning process using a relatively rotating brush and
wafer and thereby cleaning said wafer,

wherein at least one of a first quantity of cleaning
liquid flowing into said brush and a second quantity of
cleaning liquid supplied to said wafer from the outside of
said brush is regulated in accordance with a cleaning state
of said wafer,

wherein ~~functional~~ water having a function of removal of and prevention against foreign matter ~~matters~~ is discharged into said brush.

14. (currently amended) In a process for [[A]]
~~manufacturing method of a semiconductor integrated circuit~~
~~device, a method of cleaning a semiconductor wafer~~
comprising a step of performing a cleaning process using a
relatively rotating brush and wafer ~~a brush relative to a~~
~~rotating wafer~~ and thereby cleaning said wafer,

wherein said cleaning process ~~a cleaning condition~~ is regulated in accordance with a cleaning state of said wafer so that an the interval between the wafer and the brush is kept at a constant value.

15. (currently amended) The method of cleaning a semiconductor wafer ~~manufacturing method of a semiconductor integrated circuit device~~ according to claim 14,

wherein a quantity of cleaning liquid is supplied to said semiconductor wafer, and the interval between said wafer and said brush is measured, and the numbers of revolutions per minute of said wafer and said [[a]] quantity of said cleaning liquid are regulated in

accordance with a measurement result of said measurement thereof.

16. (currently amended) The method of cleaning a semiconductor wafer manufacturing method of a semiconductor integrated circuit device according to claim 14,

wherein said [[a]] quantity of said cleaning liquid is regulated[[[,] in accordance with a position of said brush on said wafer.

17. (currently amended) The method of cleaning a semiconductor wafer manufacturing method of a semiconductor integrated circuit device according to claim 14,

wherein said when cleaning is performed while said brush is moved from the center of said wafer toward the circumference thereof, and a first [[a]] quantity of cleaning liquid is supplied from said brush and is regulated so as to be slowly increased as said brush is moved from the center of said wafer toward the outer circumference thereof.

18. (currently amended) The method of cleaning a semiconductor wafer manufacturing method of a semiconductor integrated circuit device according to claim 14,

wherein said when cleaning is preformed while said brush is moved from the center of said wafer toward the outer circumference thereof, said outer circumference of said wafer having a peripheral velocity greater than a peripheral velocity of said center of said wafer whereby said peripheral velocity increases from said center of said wafer toward said periphery of said wafer, and a quantity of cleaning liquid is supplied to said brush and flowing into said brush is regulated so as to be slowly increased in accordance with said increase in the peripheral velocity of said wafer.

19. (currently amended) The method of cleaning a semiconductor wafer manufacturing method of a semiconductor integrated circuit device according to claim 14,

wherein said when cleaning is performed while said brush is moved from the center of said wafer toward the outer circumference thereof, and a quantity of cleaning liquid is supplied from the outside of said brush to said wafer and is regulated so as to be slowly decreased as said

brush is moved from the center of said wafer toward the outer circumference thereof.

20. (currently amended) The method of cleaning a semiconductor wafer ~~manufacturing method of a semiconductor integrated circuit device~~ according to claim 14,

wherein said when cleaning is performed while said brush is moved from the center of said wafer toward the outer circumference thereof, said outer circumference of said wafer having a peripheral velocity greater than a peripheral velocity of said center of said wafer whereby said peripheral velocity increases from said center of said wafer toward said periphery of said wafer, and a quantity of said cleaning liquid is supplied from the outside of said brush to said wafer and is regulated so as to be slowly decreased in accordance with increase in the peripheral velocity of said wafer

21. (currently amended) The method of cleaning a semiconductor wafer ~~manufacturing method of a semiconductor integrated circuit device~~ according to claim 14,

wherein said when cleaning is performed while said brush is moved from the center of said wafer toward the

outer circumference thereof, and a first quantity of
cleaning liquid is supplied flowing into said brush and is
regulated so as to be slowly increased and ~~said second a~~
second quantity of cleaning liquid is supplied from the
outside of said brush to said wafer and is regulated so as
to be slowly decreased, as said brush is moved from the
center of said wafer to the outer circumference thereof.

22. (currently amended) The method of cleaning a
semiconductor wafer manufacturing method of a semiconductor
integrated circuit device according to claim 14,

wherein said when cleaning is performed while said
brush is moved from the center of said wafer toward the
outer circumference thereof, said outer circumference of
said wafer having a peripheral velocity greater than a
peripheral velocity of said center of said wafer whereby
said peripheral velocity increases from said center of said
wafer toward said periphery of said wafer, and a first
[[a]] quantity of cleaning liquid is supplied flowing into
said brush and is regulated so as to be slowly increased
and a second quantity of cleaning liquid is supplied from
the outside of said brush to said wafer and is regulated so

as to be slowly decreased, in accordance with said increase in the peripheral velocity of said wafer

23. (currently amended) The method of cleaning a semiconductor wafer ~~manufacturing method of a semiconductor integrated circuit device~~ according to claim 14,

wherein after the wafer is cleaned, and when said brush returns to a wait section, and demineralized water is discharged from said brush ~~a discharge flow rate of demineralized water discharged from said brush is increased.~~

24. (currently amended) The method of cleaning a semiconductor wafer ~~manufacturing method of a semiconductor integrated circuit device~~ according to claim 14,

wherein ~~when~~ after the wafer is cleaned, said brush returns to a wait section, and said brush itself is cleaned while the brush is by being brought into contact with a removal member and brush-cleaning water is supplied to a contact portion thereof.

25. (currently amended) The method of cleaning a semiconductor wafer manufacturing method of a semiconductor integrated circuit device according to claim 14,

wherein ~~functional~~ water having a function of removal of foreign matter ~~a foreign-matter removal~~ and prevention against re-adhesion of foreign matter matters is supplied discharged into said brush.

26. (currently amended) In a process for [[A]] manufacturing method ~~of a~~ semiconductor integrated circuit device, ~~comprising a~~ method of cleaning a semiconductor wafer comprising a step of performing a cleaning process using a relatively rotating brush and wafer brush relative to a rotating wafer and thereby cleaning said wafer,

wherein said cleaning process is divided into a plurality of sub-cleaning steps, and

wherein at least one of a first quantity of cleaning liquid flowing into said brush and a second quantity of cleaning liquid supplied from the outside of said brush is altered in accordance with each of said plurality of sub-cleaning steps.

27. (currently amended) The method of cleaning a semiconductor wafer ~~manuufacturing method of a semiconductor integrated circuit device~~ according to claim 26,

wherein said plurality of sub-cleaning steps are executed in a single ~~the same~~ process chamber.

28. (currently amended) The method of cleaning a semiconductor wafer ~~manufacturing method of a semiconductor integrated circuit device~~ according to claim 26,

wherein said plurality of sub-cleaning steps are executed in separate cleaning chambers.

29. (currently amended) The method of cleaning a semiconductor wafer ~~manufacturing method of a semiconductor integrated circuit device~~ according to claim 26,

wherein said first ~~[[a]]~~ quantity of the cleaning liquid flowing into ~~from~~ said brush is kept constant in each of said plurality of sub-cleaning steps, and

wherein ~~one of~~ said first quantity of cleaning liquid is greater the quantities of said cleaning liquids in such a sub-cleaning step wherein a ~~that the~~ peripheral velocity region of said wafer is being cleaned than in relatively

~~high has a larger value than the other of the quantities of
said cleaning liquids in such a sub-cleaning step in which
a central region of said wafer is being cleaned that said
peripheral velocity is relatively high.~~

30. (currently amended) The method of cleaning a
semiconductor wafer manufacturing method of a semiconductor
integrated circuit device according to claim 26,

wherein ~~[[a]]~~ the second quantity of the cleaning
liquid supplied from the outside of said brush to the wafer
is kept constant in each of said plurality of sub-cleaning
steps, and

wherein said second quantity of cleaning liquid is
less one of the quantities of said cleaning liquids in such
a sub-cleaning step that the wherein a peripheral velocity
region of the wafer is being cleaned than in relatively
high has a smaller value than the other of the quantities
of the cleaning liquid in such a sub-cleaning step in which
a central region of the wafer is being cleaned that said
peripheral velocity is relatively high.

31. (currently amended) The method of cleaning a semiconductor wafer ~~manufacturing method of a semiconductor integrated circuit device~~ according to claim 26,

wherein the first quantity of the cleaning liquid from the said flowing into said brush is regulated set so as to slowly increase in each of said plurality of sub-cleaning steps.

32. (currently amended) The method of cleaning a semiconductor wafer ~~manufacturing method of a semiconductor integrated circuit device~~ according to claim 26,

wherein the second quantity of the cleaning liquid supplied from the outside of said brush to the wafer is regulated set so as to slowly decrease in each of said plurality of sub-cleaning steps.